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Overview - University of Wollongong Teaching & Learning Journal

Volume 5 | Issue 1 Article 2

1998

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Recommended Citation
Milne, Catherine, Coming to terms with generic skills: Developing and instructional description, *Overview - University of Wollongong Teaching & Learning Journal*, 5(1), 1998, 3-7.
Available at:http://ro.uow.edu.au/overview/vol5/iss1/2

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Abstract
Earlier this year I attended a symposium at which people examined the nature and role of generic skills in higher education institutions. From the discussions that were held, it was clear that there existed a number of different beliefs about the characteristics of generic skills. In this paper I examine some of these beliefs, try to explain why I think that these beliefs do not serve to enrich our understanding of generic skills and attempt to present some alternative, more fruitful views about the nature of generic skills.

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Coming to terms with generic skills: Developing and instructional description

Catherine Milne

Earlier this year I attended a symposium at which people examined the nature and role of generic skills in higher education institutions. From the discussions that were held, it was clear that there existed a number of different beliefs about the characteristics of generic skills. In this paper I examine some of these beliefs, try to explain why I think that these beliefs do not serve to enrich our understanding of generic skills and attempt to present some alternative, more fruitful views about the nature of generic skills.

Graduate attributes and generic skills

The University of Wollongong has been exploring the role of generic skills in courses and the relationship between generic skills and the attributes of graduates for a number of years. In 1992 staff were involved in developing a set of graduate attributes that were consistent with the University's Mission and Vision at a University Planning Conference. At this time, the development of a Strategic Plan in which the attributes of a graduate were defined was a very innovative step for a higher education institution. These attributes served to define 'graduateness' within the University (Wright, 1996). The adoption of graduate attributes indicated the University's acceptance of the notion that some skills and understandings which students were expected to develop as they studied at university could be identified. Some of the skills were identified as generic, that is, they were not restricted to a field of study (Generic Skills Working Party, 1997).

Also in 1992, the Higher Education Council in its draft advice on The Quality of Higher Education identified generic skills as skills that 'should be acquired by all graduates regardless of their discipline or field of study' (p. 15). According to this report, generic skills, attributes and values constituted one of three aspects of "desirable 'characteristics of quality'" that were 'manifest in graduates' (Higher Education Council, 1992, p. 14). In 1996, a Working Party was established to specifically examine the role of generic skills in teaching and learning at the University. In the last issue of Overview, Wright (1997) reported on the decisions of the Generic Skills Working Party and the outcomes of a workshop conducted that year. The Working Party attempted to resolve the question of how we might describe generic skills.

What are generic skills?

According to the University of Wollongong Generic Skills Working Party generic skills are 'skills which are achievable, worthwhile and essential

for all undergraduate students regardless of their course of study' (Generic Skills Working Party, 1997, p. 3). The Working Party also presents generic skills as 'relevant, useful and durable' (p. 3). These descriptions tell us something about the characteristics of generic skills but what do they tell us about generic skills specifically? As I mentioned earlier in this paper, the term 'generic skills' implies that these skills are applicable, to some extent, to all courses available within the University. For example, one of the attributes of a Wollongong graduate is listed in the Strategic Plan 1997–2005 as, 'a basic understanding of information literacy and specific skills in acquiring, organising and presenting information, particularly through computer-based activity.' It can be inferred from this statement that information literacy skills and computer literacy skills are generic skills that graduates should have the opportunity to develop as they complete their course of study. Such generic skills can be contrasted with field-specific or technical skills that are specifically related to a discipline (Wright, 1996). Therefore the generality of skills helps us to describe them as generic and serves to indicate what is meant by the term, 'generic'.

However, there seems to exist a number of beliefs about generic skills that influence the way such skills are conceptualised and how their role in curriculum and course development is identified. In this paper, some of these beliefs are described and their implications for learning examined.

Belief 1 *Generic skills, unlike content, are timeless and constant.*

Proponents of generic skills integration sometimes present this belief as an argument for a curriculum based around skill development rather than a content-based curriculum. The implication of this belief is that generic skills are actually easier to teach than content because generic skills are universal, that is, these skills are the same across cultures and do not change through time. This is contrasted with content, which is depicted as changing constantly. Proponents of this belief seem willing to argue that a specific generic skill exists as it has always existed and will continue to exist in the form that it is in today. However, I believe that there is no evidence of a universal status for generic skills and that, as a form of knowledge, they are as constructed and dynamic, as content. Farnham-Diggory (1994) supports the idea of skills as knowledge when she describes skills as a particular form of knowledge that is distinguished from other forms by its dependence on practice for improved facility.

Belief in the timelessness and universality of skills can influence the way that the learning environment is structured because it can lead believers to assume that, for a specific skill, all practitioners have the same mental model of the skill. For example, a believer who is a teacher might assume that all learners share the teacher's mental model of a skill like critical reasoning. Believers might also assume that the mental model that they have of critical reasoning is the only one and that this is the model of critical reasoning that has always existed. Accordingly, because they believe that all teachers and learners share the same notion of critical reasoning it is not necessary for them to investigate any prior understandings that learners might have about what it means to be critical. Within the learning environment constructed by these believers, little attention is directed towards examining these learners' prior understandings. However, if we accept an alternative perspective that, based on their complexity, generic skills are dynamic and constructed, it makes sense to set up a learning environment that uses assessment of learners' prior understandings of specific generic skills to assist them to develop their generic skills further.

Belief 2 *Generic skills exist as separate little entities.*

This belief can lead proponents to treat generic skills as small and discrete particles that can be moved from place to place and which can be divorced from the

cognitive and social context in which they are used (Forde, 1998). As a result, some people might begin to think of generic skills as little discrete objects that can be dropped into any subject without any thought given to the subject context. However, this objectification of generic skills might not be a helpful way of thinking about how generic skills work in subjects. Perhaps it would be more helpful to think of generic skills as integral and integrated aspects of a course that link together to form a network of skills. These skills form a framework that students use to support the understandings that they construct in their courses. Certainly, proponents of situated learning talk of 'interactive systems' rather than 'individual agents' such as skill, memory and perception (Greeno, 1997, p. 7).

Greeno argues that an appreciation of the importance of context in learning does not preclude the development of a learner's capacity to apply a skill in another context. Instead, situated learning encourages us to think of transferability as learning 'to participate in interactions that succeed over a broad range of situations' (1997, p. 7). According to him, learners should be encouraged to apply their skills in a number of different situations. He claims that:

> Methods of instruction are not only instruments for acquiring skills; they are also practices in which students learn to participate. In these practices, students develop patterns of participation that contribute to their identities as learners, which include the ways in which they take initiative and responsibility for their learning and function actively in the formulation of goals and criteria for their success. (1997, Greeno, p. 9)

Thus, according to proponents of situated learning the learner's ability to transform a learning situation provides evidence that transfer of skills has occurred. Proponents of situated learning argue for the development of 'authentic' learning environments that encourage the development of 'communities of practice' in which learners have the opportunity to experience a range of learning environments (Lave & Wenger, 1991; Rogoff, 1990). Bredo (1997) cautions against too enthusiastic an adoption of this approach to learning because it might lead educators to 'lose sight of the whole person' (p. 39). However, situated learning encourages teachers and curriculum developers to think of adopting an integrated approach to the learning of skills rather than thinking of skills as discrete units.

Belief 3 *Some generic skills can be described as intangible.*

Proponents of this belief describe 'intangible' to mean that some generic skills are so amorphous that it is too difficult to explain how learners might learn these skills. Therefore it is just too hard to establish a learning program in which learners are encouraged to develop these skills. For example, if leadership skills are intangible then it is not possible to provide a learning environment in which learners are encouraged to develop their leadership skills. Instead learners are thought to develop this skill by osmosis. It could be argued that situated learning supports this notion of skills. As a proponent of situated learning Lave (1988) proposes an apprenticeship model in which learning is the result of social interaction and the behaviour of all participants, those who are new and those who have been there a long time, is influenced by this process. In the learning environment that she describes, the learners become enculturated. The skills are embedded in a 'community of practice'. Learning involves modeling, risk taking and participation in social practices. Thus, situated learning does not conceptualise skills as intangible but places them within a meaningful context (Greeno, 1997).

Rather than thinking of skills as intangible perhaps it would be more useful to examine explicitly the skills that we think learners should develop as they work towards completing their higher education course. The graduate attributes described in the University's Strategic Plan provide some guidance in this area. The next step could be to examine both the features of these skills and the contexts or learning environments that

can be established to assist learners to develop these skills. Research into critical thinking (Olson, 1997) reinforces the developmental nature of complex generic skills that are characteristic of specific graduate attributes. Ormrod (1990) describes cognitive research that has investigated effective study skill strategies in the areas of selecting important information, summarising, organising, notetaking, underlining, self-questioning and elaborative processing. Perhaps by presenting skills explicitly within a subject we can encourage support for acceptance of the tangible nature of generic skills.

Belief 4 ***Generic skills do not need to be taught at university, students learn them at secondary school.***

Generic skills have always existed as an important but implicit component of higher education (Drew & Bingham, 1996). Often learners who achieve the necessary standards to enroll as undergraduate students are assumed by proponents of this belief to have already developed generic skills that they can apply to their studies at university. As a result, it is not deemed necessary to examine learners' prior understanding of skills or to explicitly assist learners to develop necessary skills. For example, it might be assumed that students have already developed the basic skills necessary to write an essay for the subject that they are studying in their first year at university. Further, that they will develop these skills by a process of osmosis as they sit and absorb lectures and complete the necessary assignments or lab reports. While it is possible that some students develop skills this way, this approach can deny these skills to many other students who have achieved the required academic standards to study the course that they have selected at university. Additionally, the developmental character of generic skills indicates the importance of teachers and curriculum developers providing learners with opportunities to develop their generic skills in a manner appropriate to their field of study. Higher education institutions like the University of Wollongong are recognising the importance of providing learners with opportunities to develop these skills. If this is done, all learners will benefit.

The introduction of HECS fees in the late 1980s has encouraged students to see themselves as consumers of higher education with consumer rights (Mullins, 1993). The introduction of full fee paying options for overseas and local students has increased this consumer pressure. Since University of Wollongong students are competing for employment with graduates from other institutions it becomes important to assist them to develop skills that constitute the attributes of a Wollongong graduate. This was one of the central arguments used by Arcioni (1997) who talked of generic skills offering 'an edge' to a degree for students of the University.

Conclusion

Analysis of these beliefs has indicated the complexity of identifying the significant instructional characteristics of generic skills. Generic skills can be described as dynamic, constructed, integrated, tangible and developmental. Acceptance of this description has implications for the way that we, as academics, structure our learning environments and for the way that we develop our courses. We need to:

1. seek awareness of learners' prior skill understandings and development;
2. seek to build on those prior understandings in appropriate contexts so that, by the time they complete their course, our graduates will be able to demonstrate the generic skills that are deemed important in the course;
3. ensure that these important generic skills are articulated in our subject outlines, learning outcomes and assessment procedures; and
4. structure the course program so those learners have the opportunity to develop an increasingly sophisticated facility with these generic skills.

The development of courses and learning environments based on this instructional description of generic skills can lead learners to recognise that all forms of knowledge are dynamic. We can design courses that encourage learners to develop generic skills, technical skills and understandings by providing 'authentic' learning environments in which learners are encouraged to develop and use the language of their field of study. By creating environments of this nature, we can assist learners to become 'literate' undergraduates. With the integration of specific generic skills into courses, learners can be guided towards literacy as they learn appropriate methods of analysis and data construction. By developing the generic skills associated with the communication of this information learners can begin to realise the boundaries of specific areas of study. If learners develop the generic skills and understandings that they need to be recognised as literate in their field then we will have also enhanced their ability to interact meaningfully across disciplines.

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